

Appl. No. : 10/637,450  
Filed : August 8, 2003

### AMENDMENTS TO THE CLAIMS

Please amend the Claims as follows. Insertions are shown underlined while deletions are ~~struck through~~. Please cancel Claims 11 and 30 without prejudice. Please add Claims 31-33.

1 (canceled)

2 (canceled)

3 (canceled)

4 (canceled)

5 (canceled)

6 (canceled)

7 (canceled)

8 (canceled)

9 (canceled)

10 (canceled)

11 (canceled)

12 (currently amended):     ~~The~~A non-aqueous secondary battery ~~according to Claim 11~~comprising a positive electrode, a negative electrode, a separator, and a non-aqueous electrolyte containing lithium salt and having a flat shape, wherein when a pressure of  $2.5 \text{ kg/cm}^2$  is applied to the direction of thickness of the separator, ~~the~~ thickness A of the separator is not less than 0.02 mm and not more than 0.15 mm and ~~the~~a porosity of the separator is 40% or higher, and

when the absolute value of a change rate of the thickness (mm) of the separator relative to the pressure ( $\text{kg/cm}^2$ ) applied to the direction of thickness of the separator is defined as B ( $\text{mm}/(\text{kg/cm}^2)$ ), ~~the~~ pressure F which renders  $B/A=1$  is not less than  $0.05 \text{ kg/cm}^2$  and not more than  $1 \text{ kg/cm}^2$ .

13 (currently amended):     The non-aqueous secondary battery according to Claim ~~11~~12, wherein the separator has a first separator and a second separator different from the first separator, the first separator is the separator as recited in Claim 12, and

~~when a pressure of  $2.5 \text{ kg/cm}^2$  is applied to the direction of thickness of the separator, the thickness A of the first separator is not less than 0.02 mm and not more than 0.15 mm and the porosity of the first separator is 40% or higher, and~~

~~when the absolute value of a change rate of the thickness (mm) of the first separator relative to the pressure ( $\text{kg}/\text{cm}^2$ ) applied to the direction of thickness of the first separator is defined as  $B$  ( $\text{mm}/(\text{kg}/\text{cm}^2)$ ), the pressure  $F$  which renders  $B/A=1$  is not less than  $0.05 \text{ kg}/\text{cm}^2$  and not more than  $1 \text{ kg}/\text{cm}^2$ , and~~

the second separator is a micro-porous film having a thickness of 0.05 mm or less, a pore diameter of 5  $\mu\text{m}$  or less, and a porosity of 25% or more.

14 (currently amended): ~~The~~A non-aqueous secondary battery ~~according to Claim 14~~ comprising a positive electrode, a negative electrode, a separator, and a non-aqueous electrolyte containing lithium salt and having a flat shape, wherein the separator is made of a material including polyethylene and is bonded with the positive electrode and/or the negative electrode by fusing the polyethylene in the separator.

15 (currently amended): The non-aqueous secondary battery according to Claim 14, wherein ~~the separator is bonded with the positive electrode and the negative electrode by fusing part of the separator and~~ passages for the non-aqueous electrolyte are formed to penetrate the separator from ~~the~~a front side surface to ~~the~~a rear side surface thereof.

16 (original): The non-aqueous secondary battery according to any one of Claims 12 to 15, wherein the non-aqueous secondary battery has a flat shape with a thickness of less than 12 mm and is at least 30Wh in energy capacity and at least 180 Wh/l in volume energy density.

17 (currently amended): The non-aqueous secondary battery according to ~~any one of Claims 12 to 16~~Claim 16, wherein ~~the~~a front side and ~~the~~a rear side of the flat shape are rectangular.

18 (currently amended): The non-aqueous secondary battery according to any one of Claims 12 to ~~16~~15, wherein ~~the~~a wall thickness of a battery case of the non-aqueous secondary battery is not less than 0.2 mm and not more than 1 mm.

19 (currently amended): The non-aqueous secondary battery according to ~~any one of Claims 12 to 15~~Claim 12 or 13, wherein the separator is made of a material comprising at least one of polyethylene or polypropylene as a main component.

20 (original): The non-aqueous secondary battery according to Claim 12, wherein the separator is made of non-woven fabric.

21 (previously presented): The non-aqueous secondary battery according to Claim 20, wherein the unit weight of the separator is not less than  $5 \text{ g}/\text{m}^2$  and not more than  $30 \text{ g}/\text{cm}^2$ .

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22 (original): The non-aqueous secondary battery according to Claim 13, wherein the first separator is made of non-woven fabric.

23 (previously presented): The non-aqueous secondary battery according to Claim 22, wherein the unit weight of the first separator is not less than 5 g/m<sup>2</sup> and not more than 30 g/m<sup>2</sup>.

24 (original): The non-aqueous secondary battery according to Claim 13, wherein the first and second separators are joined together integrally.

25 (original): The non-aqueous secondary battery according to Claim 13, wherein the material of the first separator is different from that of the second separator.

26 (original): The non-aqueous secondary battery according to Claim 13, wherein at least one of the first and second separators contain polyethylene.

27 (canceled)

28 (canceled)

29 (canceled)

30 (canceled)

31 (new): The secondary battery according to Claim 14, wherein the material including polyethylene further comprises a component having a fusing point different from that of polyethylene.

32 (new): The secondary battery according to Claim 31, wherein the component is polypropylene.

33 (new): The secondary battery according to Claim 32, wherein the polypropylene constitutes a core material and the polyethylene constitutes an external layer.